Shiv Bhagat

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Skills

Languages: Java, C++, C, C#, JavaScript, Python, SQL, Neo4j, R, Assembly, HTML, CSS, jQuery

Technologies: Git, ReactJS, NodeJS, Bootstrap/Tailwind, Android Studio, MS Office 365, MS Power Apps, Firebase, AWS, Microsoft Azure, API Integration, REST API, Linux, PostgreSQL

Relevant Coursework: Data Structures & Algorithms, Java OOP, Distributed Computing, Software Engineering, Distributed Systems, DBMS

Experience

Junior Application Developer *Winnipeg, MB*
Government of Manitoba *May 2025 – Present*

- Develop **responsive** front-end applications using **Bootstrap**, **JavaScript**, and **JQuery**.
- Build and consume **RESTful APIs** to integrate multiple systems and services.
- Create and maintain **C# plugins** and server-side code using **.NET framework**.
- Deliver **scalable** solution development throughout software development life cycle.
- Leverage Azure DevOps for code repository management, **CI/CD** pipelines, and deployment to servers.
- Collaborate in **Agile** environment to ensure strong teamwork and iterative delivery of solutions.

Junior Programmer Analyst *Winnipeg, MB*
Undergraduate Admissions, University of Manitoba *May 2023 – Present*

- Improve system functionalities for the University of Manitoba Undergraduate Admissions Office back-end system.
- Fix major bugs to ensure seamless operation of the admissions platform to reduce major downtime of portal.
- Develop and **optimize SQL** queries to enhance report generation efficiency.
- Conduct system's testing, new features, enhancements, ensuring optimal performance and user satisfaction.

Projects

Exosky – *NASA Space Apps Hackathon Project* *Link*

- Built a data-intensive full-stack app using **Node.js**, **Express**, and **MongoDB** to visualize 5,500+ NASA records.
- Designed APIs and implemented data parsing, caching, and transformation logic for performance.
- Deployed using **CI/CD pipelines on Azure**; monitored metrics and began exploring migration to AWS.

Blockchain Peer - *Distributed Applications / Distributed Systems, Course Work*

- Developed a blockchain peer in **Python** implementing messaging, synchronization, and consensus protocol.
- Enabled peer discovery through gossip protocol, TCP communication for block sharing, reducing block propagation time.
- Achieved proof-of-work mining to add new blocks, using cryptographic hashes for block chaining by creating blocks.
- Integrated a **multi-threaded** mining client CLI, boosting mining efficiency by 40% and allowing concurrent mining operations.

RedRadar – *Automated Market Monitoring Tool* *Link*

- Built a Python bot that monitors NASDAQ-100 and some S&P 500 tickers, computes multi-horizon returns (1d to 5y), and posts **threshold-based drop alerts** to Discord.
- Automated scheduling with **GitHub Actions** (twice per weekday) using secure secrets and variables.
- Automated market monitoring tool that fetches live index constituents, calculates %/$ changes, and delivers chunk-safe Discord alerts.

Education

University of Manitoba *May 2021 – Present*
B.Sc. (Hons) in Computer Science